

**Amendments to the Claims:**

This listing of the claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

- 1 (Currently amended). A method of treating a plaque forming disease, comprising the steps of:
- ~~\_\_\_\_\_ (a) displaying a polypeptide on a display vehicle, said polypeptide representing at least one epitope of an aggregating protein associated with plaque formation in said plaque forming disease, said at least one epitope being capable of eliciting antibodies capable of disaggregating said aggregating protein and/or of preventing aggregation of said aggregating protein; and~~
  - ~~\_\_\_\_\_ (b) introducing said display vehiclea~~  
pharmaceutical composition in accordance with claim 27 into a body of a recipient so as to elicit said antibodies capable of disaggregating said aggregating protein and/or of preventing aggregation of said aggregating protein.

2 (Original). The method of claim 1, wherein the plaque forming disease is selected from the group consisting of early onset Alzheimer's disease, late onset Alzheimer's

disease, presymptomatic Alzheimer's disease, SAA amyloidosis, hereditary Icelandic syndrome, senility and multiple myeloma.

3 (Original). The method of claim 1, wherein the plaque forming disease is selected from the group consisting of scrapie, bovine spongiform encephalopathy (BSE), kuru, Creutzfeldt-Jakob Disease (CJD), Gerstmann-Streussler-Sheinker Disease (GSS) and fatal familial insomnia (FFI).

4 (Original). The method of claim 1, wherein said aggregating protein is selected from the group consisting of beta-amyloid, serum amyloid A, cystatin C, IgG kappa light chain and prion protein.

5 (Original). The method of claim 1, wherein said display vehicle is selected from the group consisting of a virus, a bacteria and a polypeptide carrier.

6 (Original). The method of claim 5, wherein said virus is selected from the group consisting of a double stranded DNA virus, a single stranded DNA virus, a positive strand RNA virus and a negative strand RNA virus.

7 (Original). The method of claim 5, wherein said virus is a bacteriophage.

8 (Original). The method of claim 7, wherein said bacteriophage is a filamentous bacteriophage.

9 (Original). The method of claim 7, wherein said bacteriophage is capable of propagation in bacterial flora in said recipient.

10 (Original). The method of claim 7, wherein said bacteriophage is capable of propagation in *Escherichia coli*.

11 (Original). The method of claim 7, wherein said bacteriophage is fd.

12 (Original). The method of claim 1, wherein said display vehicle is an *in vivo* non-propagatable particle.

13 (Original). The method of claim 1, wherein said display vehicle is selected such that less than 30 days following an introduction of a triple dose of  $10^{10}$  units thereof to the recipient, a titer of said antibodies is above 1:50,000, as is determined by ELISA.

14-26 (Cancelled)

27 (Currently Amended). A pharmaceutical composition in unit dosage form for treating a plaque forming disease, comprising a pharmaceutically acceptable carrier and, as active ingredient, an effective amount of a display vehicle displaying a polypeptide, said polypeptide representing at least one epitope of an aggregating protein associated with plaque formation in said plaque forming disease, said at least one epitope being capable of eliciting an effective amount of antibodies capable of disaggregating said aggregating protein and/or of preventing aggregation of said aggregating protein, ~~and a pharmaceutically acceptable carrier.~~

28 (Original). The pharmaceutical composition of claim 27, wherein the plaque forming disease is selected from the group consisting of early onset Alzheimer's disease, late

onset Alzheimer's disease, presymptomatic Alzheimer's disease, SAA amyloidosis, hereditary Icelandic syndrome, senility and multiple myeloma.

29 (Original). The pharmaceutical composition of claim 27, wherein the plaque forming disease is selected from the group consisting of scrapie, bovine spongiform encephalopathy (BSE), kuru, Creutzfeldt-Jakob Disease (CJD), Gerstmann-Streussler-Sheinker Disease (GSS) and fatal familial insomnia (FFI).

30 (Original). The pharmaceutical composition of claim 27, wherein said aggregating protein is selected from the group consisting of beta-amyloid, serum amyloid A, cystatin C, IgG kappa light chain and prion protein.

31 (Original). The pharmaceutical composition of claim 27, wherein said display vehicle is selected from the group consisting of a virus, a bacteria and a polypeptide carrier.

32 (Original). The pharmaceutical composition of claim 31, wherein said virus is selected from the group consisting of a double stranded DNA virus, a single stranded DNA virus, a positive strand RNA virus and a negative strand RNA virus.

33 (Original). The pharmaceutical composition of claim 31, wherein said virus is a bacteriophage.

34 (Original). The pharmaceutical composition of claim 33, wherein said bacteriophage is a filamentous bacteriophage.

35 (Original). The pharmaceutical composition of claim 33, wherein said bacteriophage is capable of propagation in bacterial flora in said recipient.

36 (Original). The pharmaceutical composition of claim 33, wherein said bacteriophage is capable of propagation in *Escherichia coli*.

37 (Original). The pharmaceutical composition of claim 33, wherein said bacteriophage is fd.

38 (Original). The pharmaceutical composition of claim 27, wherein said display vehicle is an *in vivo* non-propagatable particle.

39 (Original). The pharmaceutical composition of claim 27, wherein said display vehicle is selected such that less than 30 days following an introduction of a triple dose of  $10^{10}$  units thereof to the recipient, a titer of said antibodies is above 1:50,000, as is determined by ELISA.

40-121 (Cancelled)

122 (New). A pharmaceutical composition in unit dosage form for treating Alzheimer's disease, comprising an effective amount of a virus displaying a polypeptide, wherein said polypeptide comprises at least one epitope of beta-amyloid, and wherein said at least one epitope is capable of eliciting an effective amount of antibodies capable of

inhibiting aggregation of said beta-amyloid, and a pharmaceutically acceptable carrier.

123 (New). The pharmaceutical composition of claim 122, wherein said virus is an *in vivo* non-propagatable particle.

124 (New). The pharmaceutical composition of claim 122, wherein said virus is selected from the group consisting of a double stranded DNA virus, a single stranded DNA virus, a positive strand RNA virus and a negative strand RNA virus.

125 (New). The pharmaceutical composition of claim 122, wherein said virus is a bacteriophage.

126 (New). The pharmaceutical composition of claim 125, wherein said bacteriophage is capable of propagation in bacterial flora in said recipient.

127 (New). The pharmaceutical composition of claim 125, wherein said bacteriophage is capable of propagation in *Escherichia coli*.

128 (New). The pharmaceutical composition of claim 122, wherein the Alzheimer's disease is early onset Alzheimer's disease.

129 (New). The pharmaceutical composition of claim 122, wherein the Alzheimer's disease is late onset Alzheimer's disease.

130 (New). The pharmaceutical composition of claim 122, wherein the Alzheimer's disease is presymptomatic Alzheimer's disease.

131 (New). The pharmaceutical composition of claim 122, wherein said virus is selected such that less than 30 days following an introduction of a triple dose of  $10^{10}$  units thereof to the recipient, a titer of said antibodies is above 1:50,000, as is determined by ELISA.

132 (New). A method of treating Alzheimer's disease, comprising introducing a pharmaceutical composition in accordance with claim 122 into a body of a recipient in need thereof so as to inhibit aggregation of beta-amyloid and treat Alzheimer's disease.

133 (New). The method of claim 132, wherein said virus is an *in vivo* non-propagatable particle.

134 (New). The method of claim 132, wherein said virus is selected from the group consisting of a double stranded DNA virus, a single stranded DNA virus, a positive strand RNA virus and a negative strand RNA virus.

135 (New). The method of claim 132, wherein said virus is a bacteriophage.

136 (New). The method of claim 135, wherein said bacteriophage is capable of propagation in bacterial flora in said recipient.

137 (New). The method of claim 135, wherein said bacteriophage is capable of propagation in *Escherichia coli*.

138 (New). The method of claim 132, wherein the Alzheimer's disease is early onset Alzheimer's disease.

Appln. No. 09/830,954

Amdt. dated March 10, 2004

Reply to Office action of September 11, 2004

139 (New). The method of claim 132, wherein the Alzheimer's disease is late onset Alzheimer's disease.

140 (New). The method of claim 132, wherein the Alzheimer's disease is presymptomatic Alzheimer's disease.

141 (New). The method of claim 132, wherein introducing said virus into the body of the recipient so as to inhibit aggregation of beta-amyloid is by applying said virus to an olfactory system of the recipient.